

**ENGINEERING DIRECTIVE**

  
CHIEF ENGINEER

IN RESPONSE TO MGL CH 87 ACTS OF 1996  
BICYCLE AND PEDESTRIAN ACCOMMODATION

**THIS DIRECTIVE SUPERSEDES E-98-002 AND IS EFFECTIVE IMMEDIATELY.**

Project design engineers shall use sound engineering practice in making reasonable provisions to accommodate bicycles and pedestrians in project designs. This generally includes assuring continuous paths of travel with smooth surfaces without obstructions or impediments. *This Directive must be addressed on all projects at the 25% design level.*

**Benchmark for Bicycle Accommodation**

The Massachusetts Highway Department benchmark for reasonable bicycle accommodation is to provide a continuous usable paved shoulder adjacent to the outside travel lane in each direction on roadways where bicycles are legally permitted. The desirable width of the outside travel lane plus the paved usable shoulder (curb lane) is at least 5.0 meters (plus 0.5-meter "guardrail" offset). When this width cannot be reasonably accommodated, the minimum width of the outside travel lane plus the paved usable shoulder (curb lane) for the accommodation of bicycles is 4.5 meters (plus 0.5 meter "guardrail" offset). For roadways with low speeds of less than 45 mph (85<sup>th</sup> percentile speeds) combined with low volumes of less than 2000 AADT, the minimum roadway widths as defined in Chapter 8 of the Highway Design Manual may be used to conform with bicycle accommodation. *Bicycle lanes and shoulder bikeways are encouraged and should be considered early in the design process.*

This Directive does not preclude the use of AASHTO design guidance for bicycle accommodation *and also applies to full depth reconstruction projects funded through the Chapter 90 Program. This Directive does not apply to maintenance type projects (resurfacing, chip sealing, etc.) funded through the Chapter 90 Program.*

## **Benchmark for Pedestrian Accommodation**

The Massachusetts Highway Department benchmark for pedestrian accommodation is to provide at least one continuous paved surface or sidewalk along all roadways where pedestrian access is legally permitted. Sidewalks must be in full conformance with AAB/ADA regulations.

## **Documentation of Non-Conformance**

The designer shall determine as soon as possible in the design process, and prior to 25% approval, whether it is feasible to accommodate bicycles and/or pedestrians as outlined herein. If accommodation is not attainable, the designer must document why such accommodation was not reasonably attainable. Such documentation will be forwarded for review to the Bicycle/Pedestrian Coordinator designated to carry out this Directive.

## **Criteria to Consider When Determining Reasonable Accommodation:**

- ◆ Impacts on Environmental Quality including: Wetlands, Floodplain, Stormwater, Trees, Park Land, Rare and Endangered Species Habitat
- ◆ Projects on Scenic Roads
- ◆ Archeological or Historical areas
- ◆ Compatibility with existing and future adjacent roadway sections
- ◆ Footprint Bridge projects
- ◆ Existing parallel facilities
- ◆ Conflicts with on street parking
- ◆ Compatibility with surrounding area
- ◆ Public safety
- ◆ Public support
- ◆ Impacts on existing Rights of Way